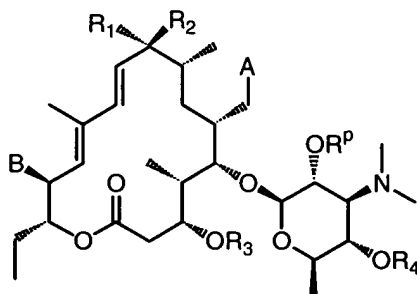


WHAT IS CLAIMED IS:

1. A compound represented by the Formula:



(I)

wherein

A is selected from the group consisting of:

- (1) -CHO or a protected aldehyde;
- (2) -CN;
- (3) -CH=N-NR₅R₆, wherein R₅ and R₆ are each independently selected from the group consisting of:
 - (a) hydrogen,
 - (b) C₁-C₆-alkyl, optionally substituted with one or more substituents selected from the group consisting of halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic,
 - (c) C₂-C₆-alkenyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic,
 - (d) C₂-C₆-alkynyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic, and
 - (e) R₅ and R₆ taken together with the nitrogen atom to which they are connected form a 3- to 7-membered ring which may optionally contain one or more heterofunctions selected from the group consisting of: -O-, -NH-, -N(C₁-C₆-alkyl)-, -N(aryl)-, -N(heteroaryl)-, -S-, -S(O)- and -S(O)₂-;
- (4) -CH=N-OR₅, wherein R₅ is as previously defined;
- (5) -CH₂X, wherein X is selected from the group consisting of:
 - (a) hydroxy or protected hydroxy;

- (b) halogen;
- (c) $-NR_5R_6$, wherein R_5 and R_6 are as previously defined;
- (d) $-NR_5C(O)-R_7$, where R_5 is as previously defined and R_7 is selected from the group consisting of:
- 5 i. hydrogen;
 - ii. C_1-C_6 -alkyl, optionally substituted with one or more substituents
 selected from the group consisting of: halogen, aryl, substituted aryl,
 heterocyclic and substituted heterocyclic;
 - 10 iii. C_2-C_6 -alkenyl, optionally substituted with one or more substituents
 selected from the group consisting of: halogen, aryl, substituted aryl,
 heterocyclic and substituted heterocyclic;
 - iv. C_2-C_6 -alkynyl, optionally substituted with one or more substituents
 selected from the group consisting of: halogen, aryl, substituted aryl,
 heterocyclic and substituted heterocyclic;
 - 15 v. aryl;
 - vi. substituted aryl;
 - vii. heterocyclic; and
 - viii. substituted heterocyclic;
- (e) $-NR_5C(O)-NR_6R_7$, where R_5 , R_6 , and R_7 are as previously defined;
- 20 (f) $-NR_5-NR_6R_7$, where R_5 , R_6 and R_7 are as previously defined;
- (g) $-NR_5-NR_6C(O)-R_7$, where R_5 , R_6 and R_7 are as previously defined;
- (h) $-S(O)_n-R_8$, where R_8 is selected from the group consisting of: aryl,
substituted aryl, heterocyclic and substituted heterocyclic, where $n = 0, 1$ or
2;
- 25 (i) $-S(O)_n-(C_1-C_6\text{-alkyl})$, optionally substituted with one or more substituents
 selected from the group consisting of: halogen, aryl, substituted aryl,
 heterocyclic and substituted heterocyclic, where n is as previously defined;
- (j) $-S(O)_n-(C_2-C_6\text{-alkenyl})$, optionally substituted with one or more substituents
selected from the group consisting of: halogen, aryl, substituted aryl,
30 heterocyclic and substituted heterocyclic, where n is as previously defined;
- (k) $-S(O)_n-(C_2-C_6\text{-alkynyl})$, optionally substituted with one or more substituents
selected from the group consisting of: halogen, aryl, substituted aryl,

heterocyclic and substituted heterocyclic, where n is as previously defined;
and

(l) -O-M-Y, where M is:

- i. absent,
- ii. -C(O)-,
- iii. -C(O)N(R₅)-, where R₅ is as previously defined,
- iv. C₁-C₆-alkyl-N(R₅)-Y, where R₅ is as previously defined,
- v. C₂-C₆-alkenyl-N(R₅)-Y, where R₅ and Y are as previously defined, or
- vi. C₂-C₆-alkynyl-N(R₅)-Y, where R₅ and Y are as previously defined,

and Y is:

- i. hydrogen,
- ii. C₁-C₆-alkyl, optionally substituted with one or more substituents selected from the group consisting of halogen, -OR₅, aryl, substituted aryl, heterocyclic and substituted heterocyclic, where R₅ is as previously defined,
- iii. C₂-C₆-alkenyl, optionally substituted with one or more substituents selected from the group consisting of halogen, -OR₅, aryl, substituted aryl, heterocyclic and substituted heterocyclic, where R₅ is as previously defined,
- iv. C₂-C₆-alkynyl, optionally substituted with one or more substituents selected from the group consisting of halogen, -OR₅, aryl, substituted aryl, heterocyclic and substituted heterocyclic, where R₅ is as previously defined,
- v. aryl,
- vi. substituted aryl,
- vii. heterocyclic, or
- viii. substituted heterocyclic; and

(6) heterocyclic or substituted heterocyclic;

B is selected from the group consisting of:

- (1) -CHO or a protected aldehyde;
- (2) -CN;
- (3) -CH=N-NR₅R₆, wherein R₅ and R₆ are as previously defined;
- (4) -CH=N-OR₅, wherein R₅ is as previously defined;
- (5) -CH₂Z, wherein Z is selected from the group consisting of:

- a. halogen;
- b. $\text{-NR}_5\text{C(O)-R}_7$, where R_5 and R_7 are as previously defined;
- c. $\text{-NR}_5\text{C(O)-NR}_6\text{R}_7$, where R_5 , R_6 , and R_7 are as previously defined;
- d. $\text{-NR}_5\text{-NR}_6\text{R}_7$, where R_5 , R_6 and R_7 are as previously defined;
- 5 e. $\text{-NR}_5\text{-NR}_6\text{C(O)-R}_7$, where R_5 , R_6 and R_7 are as previously defined;
- f. $\text{-S(O)}_n\text{-R}_8$, where R_8 and n are as previously defined;
- g. $\text{-S(O)}_n\text{-(C}_1\text{-C}_6\text{-alkyl)}$, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic, where n is as previously defined;
- 10 h. $\text{-S(O)}_n\text{-(C}_2\text{-C}_6\text{-alkenyl)}$, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic, where n is as previously defined;
- i. $\text{-S(O)}_n\text{-(C}_2\text{-C}_6\text{-alkynyl)}$, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic, where n is as previously defined;
- 15 and
- j. $\text{-NR}_9\text{R}_{10}$, where R_9 and R_{10} are each independently selected from the group consisting of:
 - i. hydrogen;
 - 20 ii. $\text{C}_1\text{-C}_6\text{-alkyl}$, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, -O-R_5 and $\text{-NR}_5\text{R}_6$, where R_5 and R_6 are as previously defined;
 - 25 iii. $\text{C}_2\text{-C}_6\text{-alkenyl}$, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -O-R_5 and $\text{-NR}_5\text{R}_6$, where R_5 and R_6 are as previously defined;
 - 30 iv. $\text{C}_2\text{-C}_6\text{-alkynyl}$, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, O-R_5 and NR_5R_6 , where R_5 and R_6 are as previously defined; and
 - v. -W-R_{11} , where W is selected from the group consisting of:
 - 1. -C(O)- ;
 - 2. -C(O)O- ;

3. $-C(S)-$;
4. $-C(S)-S-$;
5. $-C(S)-O-$;
6. $-C(S)-NR_5$, where R_5 is as previously defined;
- 5 7. $-C(O)NR_5$, where R_5 is as previously defined;
8. $-C(=NR_5)-O-$, where R_5 is as previously defined; and
9. $-C(=NR_5)-NR_6$, where R_5 and R_6 are as previously defined, and where R_{11} is selected from the group consisting of:
 - a. hydrogen;
 - 10 b. C_1-C_6 -alkyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic;
 - 15 c. C_2-C_6 -alkenyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic;
 - 20 d. C_2-C_6 -alkynyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic;
- vi. R_9 and R_{10} taken together with the nitrogen atom they are attached to represent the carbon or hetero atoms necessary to form a heterocyclic or substituted heterocyclic moiety; and
- 25 vii. R_9 and R_{10} , taken together with the nitrogen atom they are attached to form a 4 to 8 membered ring which contains one or more W moieties, and optionally may contain one or more heteromoieties selected from the group consisting of $-O-$, $-S-$, $-S(O)_2-$ and $-NR_5-$, where W and R_5 are as previously defined;
- 30 R_1 and R_2 are each independently selected from the group consisting of:
 - (1) hydrogen;
 - (2) hydroxy;
 - (3) protected hydroxy;

- (4) -OC(O)-C₁-C₁₂-alkyl, optionally substituted with one or more substituents selected from the group consisting of halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, O-R₅ and NR₅R₆ where R₅ and R₆ are as previously defined;
- 5 (5) -O-R₅, where R₅ is as previously defined;
- (6) halogen;
- (7) -NR₅R₆, where R₅ and R₆ are as previously defined; and
- (8) R₁ and R₂ taken together are = O;
- R₃ is selected from the group consisting of:
- 10 (1) hydrogen;
- (2) a hydroxy protecting group;
- (3) -C(O)-C₁-C₁₂-alkyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -OR₅ and -NR₅R₆, where R₅ and R₆ are as
- 15 previously defined;
- (4) C₁-C₆-alkyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -OR₅ and -NR₅R₆, where R₅ and R₆ are as previously defined;
- (5) C₂-C₆-alkenyl, optionally substituted with one or more substituents selected
- 20 from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -OR₅ and -NR₅R₆, where R₅ and R₆ are as previously defined; and
- (6) C₂-C₆-alkynyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic,
- 25 substituted heterocyclic, -OR₅ and -NR₅R₆, where R₅ and R₆ are as previously defined;
- R₄ is -M-Y, where M and Y are as previously defined; and
- R^p is hydrogen or a hydroxy protecting group.
- 30 2. A compound according to Claim 1 where R₃ is selected from the group consisting of:
- (1) C₁-C₆-alkyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -O-R₅ and -NR₅R₆, where R₅ and R₆ are as defined in Claim 1;

- (2) C₂-C₆-alkenyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -O-R₅ and -NR₅R₆, where R₅ and R₆ are as previously defined; and
- 5 (3) C₂-C₆-alkynyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -O-R₅ and -NR₅R₆, where R₅ and R₆ are as previously defined.
- 10 3. A compound according to Claim 2, where R₁ and R₂ taken together are = O.
4. A compound according to Claim 3, where R₄ is hydrogen.
5. A compound according to Claim 1, where R₄ is selected from the group consisting
- 15 of:
- (1) C₁-C₆-alkyl, optionally substituted with one or more substituents selected from the group consisting of: halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -O-R₅ and -NR₅R₆, where R₅ and R₆ are as defined in Claim 1;
- 20 (2) C₂-C₆-alkenyl, optionally substituted with one or more substituents selected from the group consisting of halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -O-R₅ and -NR₅R₆, where R₅ and R₆ are as previously defined; and
- 25 (3) C₂-C₆-alkynyl, optionally substituted with one or more substituents selected from the group consisting of halogen, aryl, substituted aryl, heterocyclic, substituted heterocyclic, -O-R₅ and -NR₅R₆, where R₅ and R₆ are as previously defined.
6. A compound according to Claim 5, where R₁ and R₂ taken together are = O.
- 30 7. A compound according to Claim 6, where R₃ is hydrogen.
8. A compound as defined in Claim 1 which is selected from the group consisting of: Compound of Formula I: A = -CHO, B = -CH₂-N(CH₃)₂, R₁ and R₂ taken together are = O, R₃ = H, R₄ = H and R^P = H;

- Compound of Formula I: A = -CHO, B = -CH₂-NH-CH₂CH₂Phenyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = H and R^P = H;
- Compound of Formula I: A = -CHO, B = -CH₂-N(CH₃)-CH₂CH₂Phenyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = H and R^P = H;
- 5 Compound of Formula I: A = -CHO, B = -CH₂-NH-CH₂CH₂-(2-pyridyl) R₁ and R₂ taken together are = O, R₃ = H, R₄ = H and R^P = H;
- Compound of Formula I: A = -CHO, B = -CH₂-4-morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = H and R^P = H;
- 10 Compound of Formula I: A = -CHO, B = -CH₂-1-imidazolyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = H and R^P = H;
- Compound of Formula I: A = -CHO, B = -CH₂-N(CH₃)₂, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(3-quinolyl) and R^P = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(3-quinolyl) and R^P = H;
- 15 Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(3-quinolyl) and R^P = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(3-quinolyl) and R^P = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(5-pyrimidyl) and R^P = H;
- 20 Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(5-pyrimidyl) and R^P = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(5-pyrimidyl) and R^P = H;
- 25 Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CCCH₂-(phenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCHCH₂-(phenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂CH₂-(phenyl) and R^P = H;
- 30 Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CCCH₂-(4-fluorophenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCHCH₂-(4-fluorophenyl) and R^P = H;

- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂CH₂-(4-fluorophenyl) and R^p = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CCCH₂-(3-quinolyl) and R^p = H;
- 5 Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCHCH₂-(3-quinolyl) and R^p = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂CH₂-(3-quinolyl) and R^p = H;
- 10 Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(2-pyridyl) and R^p = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(2-pyridyl) and R^p = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(2-pyridyl) and R^p = H;
- 15 Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(3-pyridyl) and R^p = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(3-pyridyl) and R^p = H;
- Compound of Formula I: A = CHO, B = morpholyl, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(3-pyridyl) and R^p = H;
- 20 Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(3-quinolyl) and R^p = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(3-quinolyl) and R^p = H;
- 25 Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(3-quinolyl) and R^p = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(5-pyrimidyl) and R^p = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(5-pyrimidyl) and R^p = H;
- 30 Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(5-pyrimidyl) and R^p = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CCCH₂-(phenyl) and R^p = H;

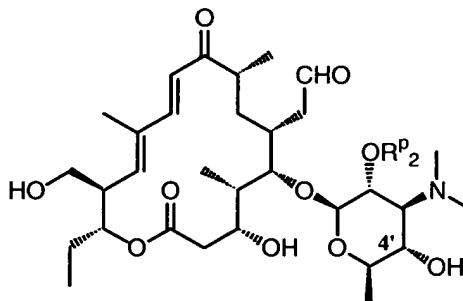
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCHCH₂-(phenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂CH₂-(phenyl) and R^P = H;
- 5 Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CCCH₂-(4-fluorophenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCHCH₂-(4-fluorophenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂CH₂-(4-fluorophenyl) and R^P = H;
- 10 Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CCCH₂-(3-quinolyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCHCH₂-(3-quinolyl) and R^P = H;
- 15 Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂CH₂-(3-quinolyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(2-pyridyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(2-pyridyl) and R^P = H;
- 20 Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(2-pyridyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(3-pyridyl) and R^P = H;
- 25 Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(3-pyridyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CH₂F, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(3-pyridyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(3-quinolyl) and R^P = H;
- 30 Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(3-quinolyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(3-quinolyl) and R^P = H;

- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(5-pyrimidyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(5-pyrimidyl) and R^P = H;
- 5 Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(5-pyrimidyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CCCH₂-(phenyl) and R^P = H;
- 10 Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCHCH₂-(phenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂CH₂-(phenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CCCH₂-(4-fluorophenyl) and R^P = H;
- 15 Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCHCH₂-(4-fluorophenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂CH₂-(4-fluorophenyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CCCH₂-(3-quinolyl) and R^P = H;
- 20 Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCHCH₂-(3-quinolyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂CH₂-(3-quinolyl) and R^P = H;
- 25 Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(2-pyridyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(2-pyridyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(2-pyridyl) and R^P = H;
- 30 Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CC-(3-pyridyl) and R^P = H;
- Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CHCH-(3-pyridyl) and R^P = H; and

Compound of Formula I: A = CHO, B = CN, R₁ and R₂ taken together are = O, R₃ = H, R₄ = CH₂CH₂CH₂-(3-pyridyl) and R^P = H.

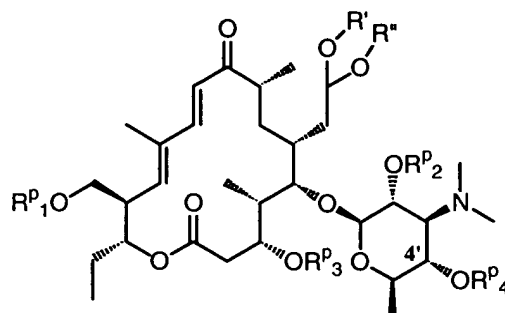
9. A pharmaceutical composition for treating bacterial infections comprising a therapeutically effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt, ester or prodrug thereof in combination with a pharmaceutically acceptable carrier.
10. A method for treating bacterial infections comprising administering to an animal in need of such treatment a pharmaceutical composition comprising a pharmaceutically effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt, ester or prodrug thereof.
11. A process for preparing a compound represented by Formula I as defined in Claim 1 comprising:

(a) reacting a compound represented by the formula:



wherein R^P₂ is a hydroxy protecting group, with:

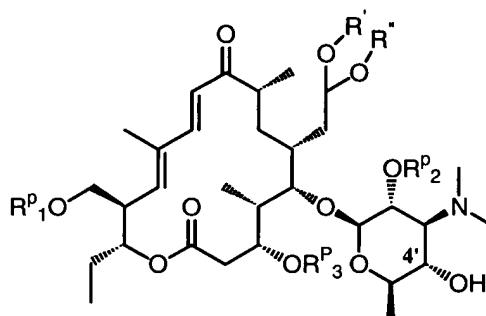
- i. an acetalating agent at a pH between 1 to 4 in an alcoholic solvent; and
- ii. treating with a silylating agent, optionally with the addition of a catalyst in an aprotic solvent at a temperature between 0°C to 50°C for 1 to 48 hours to provide a compound represented by the Formula:



wherein R^P_1 , R^P_2 , R^P_3 and R^P_4 are hydroxy protecting groups, and R' and R'' are each C_1 - C_6 -alkyl or when taken together are $-CH_2CH_2-$ or $-CH_2CH_2CH_2-$;

5

(b) treating the compound from step (a) with an acid in an organic solvent at a temperature between 0°C and 50°C for 1 – 24 hours to provide a compound represented by the formula:

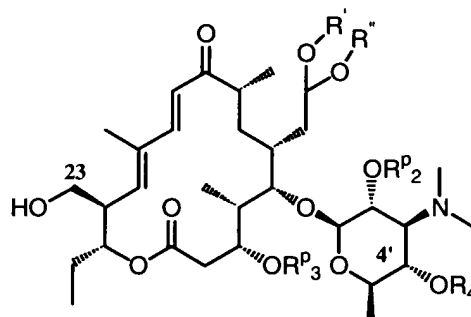


wherein R^P_1 , R^P_2 , R^P_3 , R' and R'' are as previously defined;

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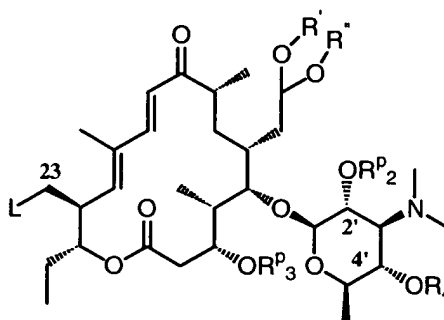
(c) reacting the compound from step (b) with an alkylating agent represented by the formula R_4X , wherein X is a halogen or sulphonyl group and R_4 is as defined in Claim 1, in the presence of a base in an aprotic solvent at a temperature between -20°C to 60°C optionally in the presence of water and a phase transfer catalyst, and then treating with an acid in an organic solvent at a temperature between room temperature to 100°C for 1 to 48 hours to provide a compound represented by the formula:

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wherein R^P_2 , R^P_3 , R_4 , R' and R'' are as previously defined;

- (d) treating the compound from step (c) with triphenylphosphine and a halogenating agent or with a sulfonic anhydride or sulfonyl chloride in an aprotic organic solvent at a temperature between -78°C and 50°C for 30 minutes to 48 hours, optionally in the presence of an amine base and a catalyst, to provide a compound represented by the formula:



where L is selected from the group consisting of chlorine, bromine, iodine, mesylate and tosylate and R^P_2 , R^P_3 , R_4 , R' and R'' are as previously defined; and

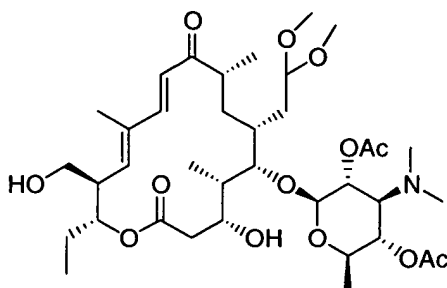
- (e) treating the compound from step (d) with an amine of the formula NHR_5R_6 , wherein R_5 and R_6 are as defined in Claim 1, at a temperature from 0°C to 100°C for 1 to 24 hours, optionally deprotecting the product by:

- i. treating with an aqueous acid in an organic solvent at a temperature from 0°C to 100°C for 1 to 24 hours; and
- ii. stirring in methanol at a temperature between room temperature and reflux temperature for 4 to 24 hours;

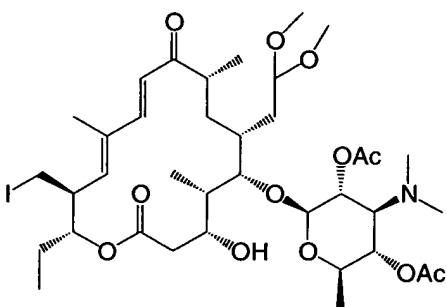
to provide a compound represented by Formula I wherein A is $-\text{CHO}$, B is $-\text{CH}_2-\text{NR}_5\text{R}_6$, R_1 and R_2 together are O, R_3 is H, R^P is H, and R_4 is as defined in Claim 1.

12. A process for preparing a compound represented by Formula I, as defined in Claim 1 comprising:

(a) reacting a compound represented by the Formula:



- 5 where Ac is $-\text{COCH}_3$, in an aprotic organic solvent with a sulfonic anhydride or sulphonyl halide in the presence of an amine base, optionally with a catalyst, between 0°C and room temperature for 30 minutes to two hours and treating the resulting product with sodium iodide, at a temperature between 0°C to 100°C for 1 to 24 hours, to
- 10 provide a compound represented by the formula:



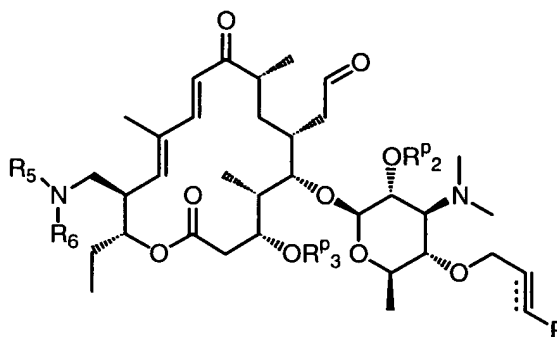
where Ac is as previously defined; and

- (b) treating the compound from step (a) with an amine of the formula NHR_5R_6 , where R_5 and R_6 are as defined in Claim 1, at a temperature
- 15 from 0°C to 100°C for 1 to 24 hours, optionally deprotecting the product by:

- i. treating with an aqueous acid in an organic solvent at a temperature from 0°C to 100°C for 1 to 24 hours; and
 - ii. stirring in methanol at a temperature between room temperature
- 20 and reflux temperature;

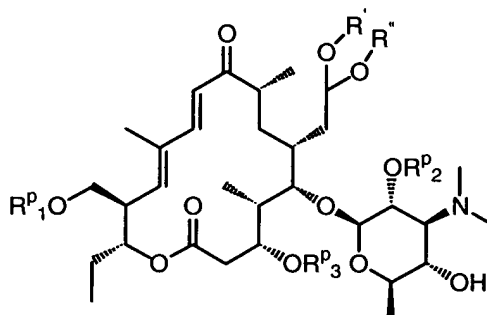
to provide a compound represented by Formula I where A is $-\text{CHO}$, B is $-\text{CH}_2-\text{NR}_5\text{R}_6$, R_1 and R_2 taken together are O, R_3 is H, R^P is H, and R_4 is H.

13. A process for preparing a compound represented by the formula:



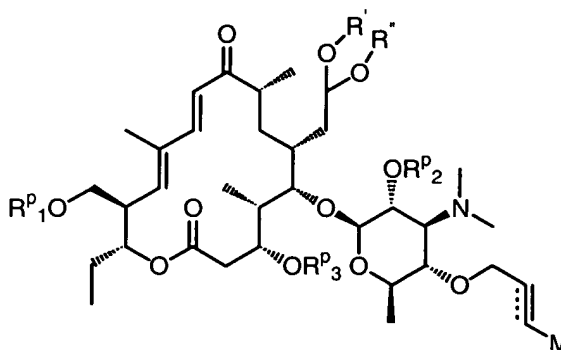
- 5 wherein R is aryl, substituted aryl, heteroaryl, or substituted heteroaryl, R^P_2 and R^P_3 are each independently hydrogen or a hydroxy protecting group and R_5 and R_6 are as defined in Claim 1, comprising:

- (a) reacting a compound represented by the formula:



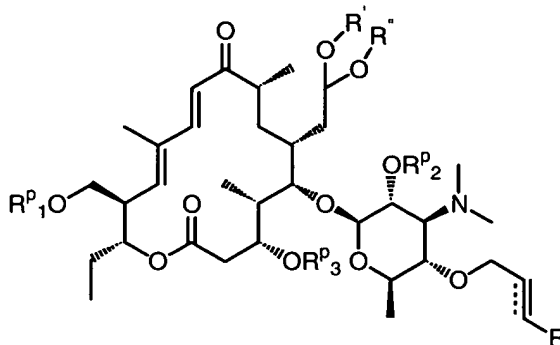
- 10 wherein R^P_1 , R^P_2 and R^P_3 are hydroxy protecting groups, and R' and R'' are each C_1 - C_6 -alkyl or when taken together are $-CH_2CH_2-$ or $-CH_2CH_2CH_2-$, with a propargyl halide and optionally reducing the product with a borane or stannane reagent to give a vinyl borane or vinyl stannane derivative represented by the formula:

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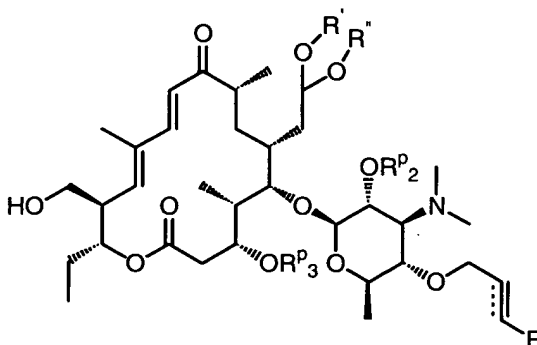
wherein M is hydrogen, B(OH)₂ or SnBu₃ and R^P₁, R^P₂, R^P₃, R' and R'' are as previously defined;

- (b) reacting the compound from step (a) with a compound represented by the formula R-X wherein R is aryl, substituted aryl, heteroaryl, or substituted heteroaryl and X is a halide or triflate, in the presence of a palladium catalyst to give a compound represented by the formula:



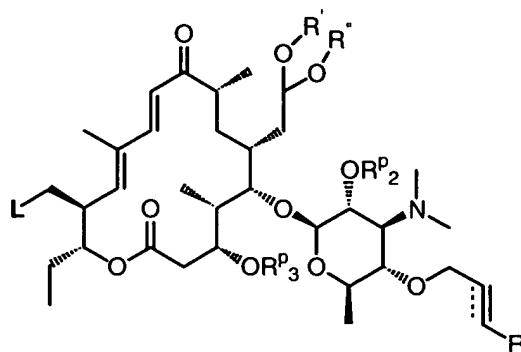
wherein R, R^P₁, R^P₂, R^P₃, R' and R'' are as previously defined; and

- (c) treating the compound from step (b) with an organic acid in an organic solvent at a temperature between room temperature to 100°C for 1-48 hours to provide a compound represented by the formula:



wherein R , R^{p_2} , R^{p_3} , R' and R'' are as previously defined;

- (d) treating the compound from step (c) with triphenylphosphine and a halogenating agent or with a sulfonic anhydride or sulfonyl chloride in an aprotic organic solvent at a temperature between -78°C to 50°C for 30 minutes to 48 hours, optionally in the presence of an amine base and a catalyst, to provide a compound represented by the formula:

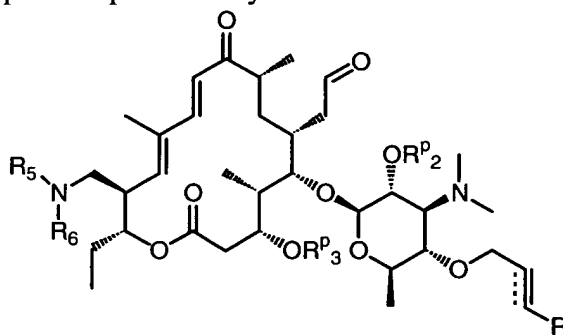


where L is chlorine, bromine, iodine, mesylate or tosylate and R^P_2 , R^P_3 , R , R' and R'' are as previously defined; and

(e) treating the compound from step (d) with an amine of the formula NHR_5R_6 , where R_5 and R_6 are as defined in Claim 1, at a temperature from 0°C to 100°C for 1 to 24 hours, optionally deprotecting the product by:

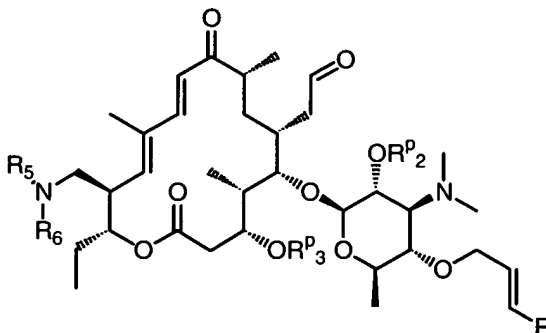
- i. treating with an aqueous acid in an organic solvent at a temperature from 0°C to 100°C for 1 to 24 hours; and
- ii. stirring in methanol at a temperature between room temperature and reflux temperature for 4 to 24 hours;

to provide a compound represented by the formula:



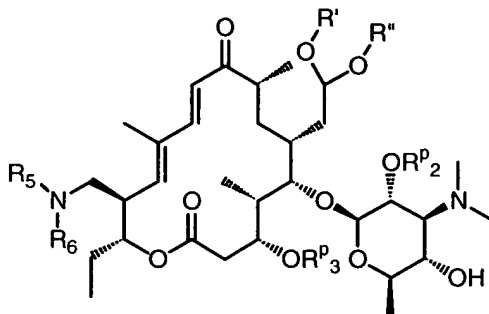
wherein R^P_2 , R^P_3 , R , R_5 and R_6 are as previously defined.

14. A process for preparing a compound represented by the formula:

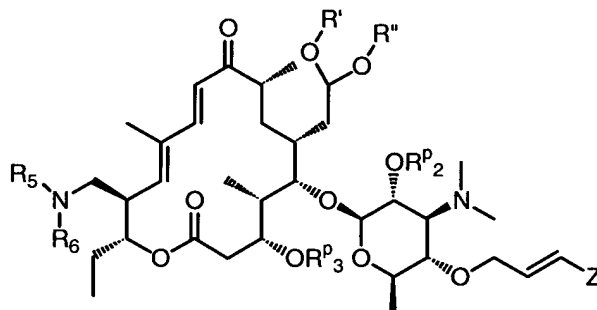


wherein R is aryl, substituted aryl, heteroaryl, or substituted heteroaryl, R^{P_2} , and R^{P_3} are each independently hydrogen or a hydroxy protecting group, and R_5 and R_6 are as defined in Claim 1, comprising:

(a) reacting a compound represented by the formula:

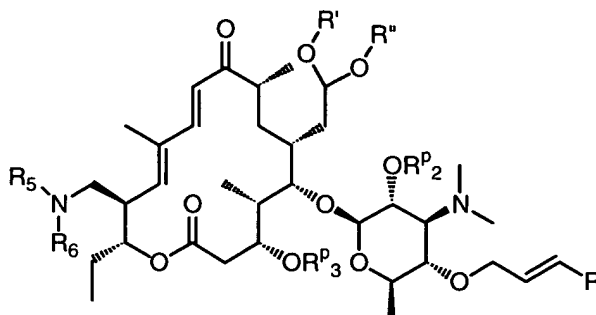


wherein R^{P_2} and R^{P_3} are hydroxy protecting groups, and R' and R'' are each C_1 - C_6 -alkyl or when taken together are $-CH_2CH_2-$ or $-CH_2CH_2CH_2-$ and R_5 and R_6 are as defined in Claim 1, with a tert-butyl allyl carbonate or an aryl tert-butyl allyl carbonate in the presence of a palladium catalyst to provide a compound represented by the formula:



wherein Z is hydrogen or R and where R, R_5 , R_6 , R^{P_2} , R^{P_3} , R' and R'' are as previously defined;

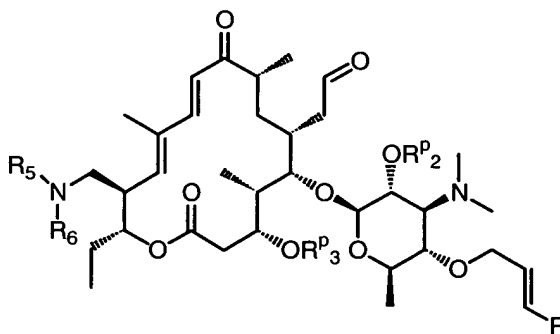
(b) when Z is hydrogen, reacting the compound from step (a) with a compound represented by the formula R-X where R is aryl, substituted aryl, heteroaryl, or substituted heteroaryl and X is a halide or triflate, in the presence of a palladium catalyst to provide a compound represented by the formula:



wherein R, R₅, R₆, R^P₂, R^P₃, R' and R'' are as previously defined,
optionally deprotecting the compound from step (a) or (b) by:

- i. treating with an aqueous acid in an organic solvent at a temperature from 0°C to 100°C for 1 to 24 hours; and
- ii. stirring in methanol at a temperature between room temperature and reflux temperature for 24 hours;

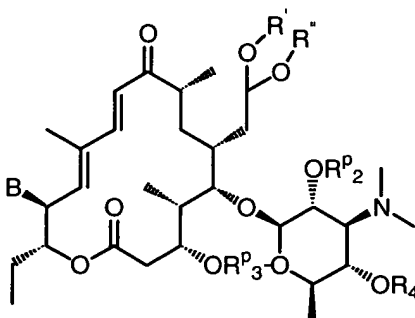
to provide a compound represented by the formula:



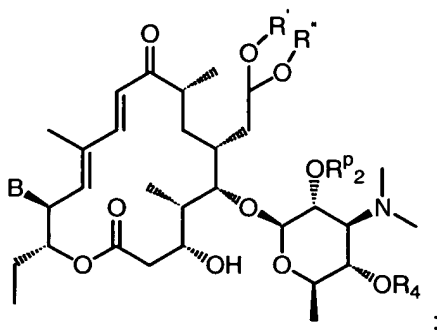
where R, R₅, R₆, R^P₂, and R^P₃ are as previously defined.

15. A process for preparing a compound represented by Formula I, as defined in Claim 1, comprising:

(a) reacting a compound represented by the formula:

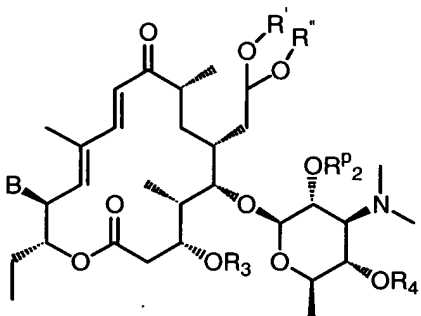


where B and R₄ are as defined in Claim 1, R^P₂ and R^P₃ are each independently hydroxy protecting groups, and R' and R'' are each C₁-C₆-alkyl or when taken together are -CH₂CH₂- or -CH₂CH₂CH₂-, with tetrabutyl ammonium fluoride or hydrofluoric acid to provide a compound represented by the formula:



wherein B, R₄, R^P₂, R' and R'' are as previously defined,

(b) reacting the compound from step (a) with an alkylating agent in the presence of a base in an aprotic solvent at a temperature between -20°C and 60°C to provide a compound of the formula:



wherein R₃ is as defined in Claim 1 and B, R₄, R^P₂, R' and R'' are as previously defined,

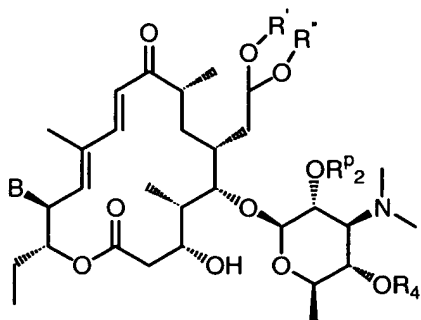
optionally deprotecting the compound from step (b) by:

- i. treating with an aqueous acid in an organic solvent at a temperature between 0°C and 100°C for 1 to 24 hours; and
- ii. stirring in methanol at a temperature between room temperature and reflux temperature;

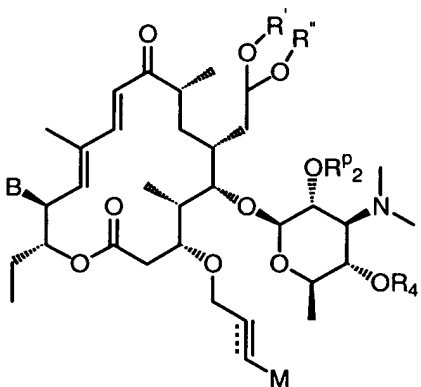
to provide a compound represented by Formula I wherein A is -CHO, R₁ and R₂ taken together are = O, B, R₃ and R₄ are as defined in Claim 1 and R_P is hydrogen.

16. A process for preparing a compound represented by Formula I, as defined in Claim 1, comprising:

(a) reacting a compound represented by the formula:

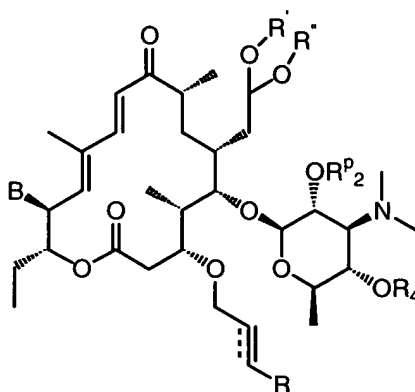


- 5 wherein B and R₄ are as defined in Claim 1, R^P₂ is a hydroxy protecting group, and R' and R'' are each C₁-C₆-alkyl or when taken together are -CH₂CH₂- or -CH₂CH₂CH₂-, with a propargyl halide and optionally reducing the product with a borane or stannane reagent to give a vinyl borane or vinyl stannane derivative represented by the Formula:



- 10 wherein M is hydrogen, B(OH)₂ or SnBu₃ and B, R₄, R^P₂, R' and R'' are as previously defined;

- 15 (b) reacting the compound from step (a) with a compound represented by the formula R-X where R is aryl, substituted aryl, heteroaryl, or substituted heteroaryl, and X is a halide or triflate, in the presence of a palladium catalyst to give a compound represented by the formula:



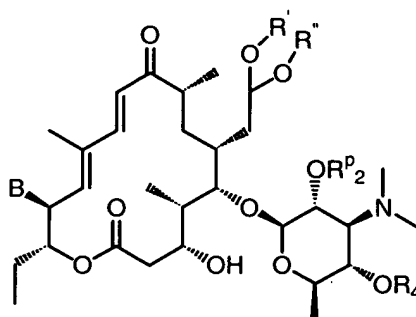
wherein B, R, R₄, R'², R' and R'' are as previously defined,
optionally deprotecting the compound from step (b) by:

- i. treating with an aqueous acid in an organic solvent at a temperature between 0°C and 100°C for 1 to 24 hours; and
- ii. stirring in methanol at a temperature between room temperature and reflux temperature;

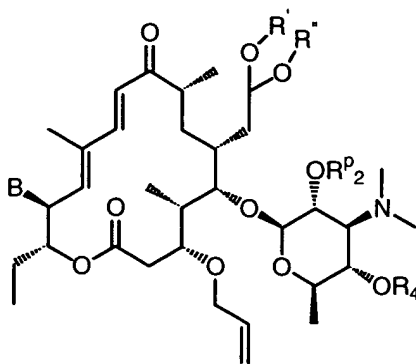
to provide a compound represented by Formula I wherein A is -CHO, R₁ and R₂ taken together are O, R₃ is -CH₂CHCH-R or -CH₂C≡C-R, R is as previously defined, B and R₄ are as defined in Claim 1, and R^P is hydrogen.

17. A process for preparing a compound represented by Formula I, as defined in Claim 1 comprising

(a) reacting a compound represented by the formula:

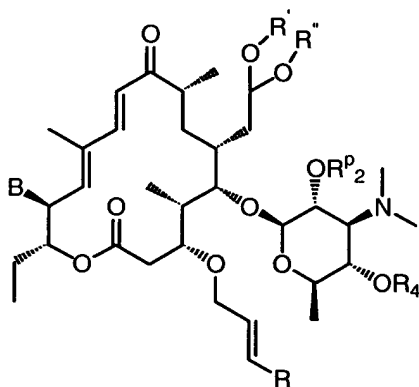


wherein B and R₄ are as defined in Claim 1, R'^P is a hydroxy protecting group, and R' and R'' are each C₁-C₆-alkyl or when taken together are -CH₂CH₂- or -CH₂CH₂CH₂-, with an allyl halide to give a compound represented by the formula:



wherein B, R₄, R'², R' and R'' are as previously defined;

- (b) reacting the compound from step (a) with a vinyl-R derivative, where R is aryl, substituted aryl, hetroaryl or substituted heteroaryl, using a ruthenium catalyst, to provide a compound represented by the formula:



wherein B, R, R₄, R'², R' and R'' are as previously defined,

optionally deprotecting the compound from step (b) by:

- i. treating with an aqueous acid in an organic solvent at a temperature between 0°C and 100°C for 1 to 24 hours; and
- ii. stirring in methanol at a temperature between room temperature and reflux temperature;

to provide a compound represented by Formula I wherein A is -CHO, R₁ and R₂ taken together are O, R₃ is -CH₂CHCH-R, R is as previously defined, B and R₄ are as defined in Claim 1, and R^P is hydrogen.